

Translation

PATENT COOPERATION TREATY

541647  
PCT/EP2004/000163



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>D80967PC</b>	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. <b>PCT/EP2004/000163</b>	International filing date ( <i>day/month/year</i> ) <b>13 January 2004 (13.01.2004)</b>	Priority date ( <i>day/month/year</i> ) <b>13 January 2003 (13.01.2003)</b>
International Patent Classification (IPC) or national classification and IPC <b>C07C 51/43</b>		
Applicant <b>STOCKHAUSEN GMBH</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
a. <input type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of _____ sheets, as follows:
<input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
<input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:
<input checked="" type="checkbox"/> Box No. I Basis of the report
<input type="checkbox"/> Box No. II Priority
<input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI Certain documents cited
<input type="checkbox"/> Box No. VII Certain defects in the international application
<input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand <b>01 July 2004 (01.07.2004)</b>	Date of completion of this report <b>07 January 2005 (07.01.2005)</b>
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/000163

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:

- international search (under Rules 12.3 and 23.1(b))
- publication of the international application (under Rule 12.4)
- international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- The international application as originally filed/furnished  
 the description:

pages \_\_\_\_\_ 1-31 \_\_\_\_\_, as originally filed/furnished  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- the claims:

pages \_\_\_\_\_ 1-27 \_\_\_\_\_, as originally filed/furnished  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_, as amended (together with any statement) under Article 19  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- the drawings:

pages \_\_\_\_\_ 1/3-3/3 \_\_\_\_\_, as originally filed/furnished  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

- a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

- the description, pages \_\_\_\_\_
- the claims, Nos. \_\_\_\_\_
- the drawings, sheets/figs \_\_\_\_\_
- the sequence listing (*specify*): \_\_\_\_\_
- any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages \_\_\_\_\_
- the claims, Nos. \_\_\_\_\_
- the drawings, sheets/figs \_\_\_\_\_
- the sequence listing (*specify*): \_\_\_\_\_
- any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1 - 24	YES
	Claims	25 - 27	NO
Inventive step (IS)	Claims	1 - 24	YES
	Claims	25 - 27	NO
Industrial applicability (IA)	Claims	1 - 27	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

## 1. Prior art citations:

- D1: DE 863 050 C (ROEHM & HAAS GMBH)  
15 January 1953 (1953-01-15)
- D2: US-A-3 663 375 (WITHEFORD JOHN MAURICE)  
16 May 1972 (1972-05-16)
- D3: EP-A-1 002 787 (MITSUBISHI RAYON CO)  
24 May 2000 (2000-05-24)
- D4: US-B-6 448 4391 (ECK BERND ET AL)  
10 September 2002 (2002-09-10)
- D5: US-B-6 174 9291 (ANSTOCK THOMAS ET AL)  
16 January 2001 (2001-01-16).

## 2. Novelty

The subject matter of the application  
(claims 1-24) differs from:

D1 and D2 in that, by lowering the temperature,  
the product is crystallised out;

D3 and D4 in that, prior to crystallisation, the  
starter mixture can be separated into more than one  
liquid phase by adding a phase-separating agent.

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In claim 25, the expression "can be obtained according to a method" does not constitute a restricting feature. In consequence, the subject matter of the application (claims 25-27) is not novel over documents D1 to D5 since the monomer is described in said documents. The use for the production of, for example, foamed materials is described in D5.

### 3. Inventive step

It is known from D1 and D2 that an educt containing (meth)acrylic acid can be separated into more than one liquid phase by adding a phase-separating agent. However, distillation processes are used thereafter.

It is also known from D3 and D4 that (meth)acrylic acid can be purified by crystallisation.

The problem addressed by the invention can be regarded as that of developing a method for the purification of specific monomers.

In the light of the examples, this problem is solved.

The prior art does not contain any clear indications of the solution. D4 (see column 7, line 45) states explicitly that no further solvent

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is added. Thus, the solution is non-obvious and an inventive step can be acknowledged.

However, claims 25-27 are not inventive since the monomers and their use are already known.